

10/501,347

(FILE 'HOME' ENTERED AT 16:24:35 ON 22 MAR 2007)

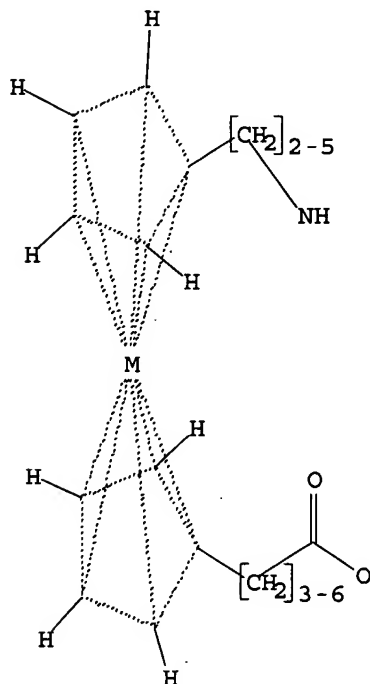
FILE 'REGISTRY' ENTERED AT 16:24:50 ON 22 MAR 2007

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 16:25:37 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 210 TO ITERATE

100.0% PROCESSED 210 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 3331 TO 5069

PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 16:25:46 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 4314 TO ITERATE

100.0% PROCESSED 4314 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

L3 0 SEA SSS FUL L1

(FILE 'HOME' ENTERED AT 16:24:35 ON 22 MAR 2007)

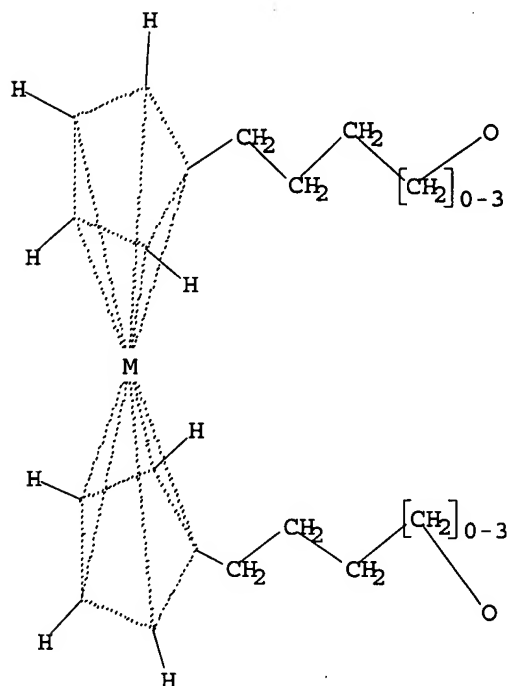
FILE 'REGISTRY' ENTERED AT 16:24:50 ON 22 MAR 2007

L1 STRUCTURE UPLOADED  
L2 0 S L1  
L3 0 S L1 FULL  
L4 STRUCTURE UPLOADED

=> d l4

L4 HAS NO ANSWERS

L4 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l4

SAMPLE SEARCH INITIATED 16:27:45 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 1984 TO ITERATE

100.0% PROCESSED 1984 ITERATIONS

1 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 37009 TO 42351

PROJECTED ANSWERS: 1 TO 80

L5 1 SEA SSS SAM L4

=> s l4 full

FULL SEARCH INITIATED 16:27:52 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 38592 TO ITERATE

100.0% PROCESSED 38592 ITERATIONS

39 ANSWERS

SEARCH TIME: 00.00.01

L6

39 SEA SSS FUL L4

=&gt; fil caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

345.55

345.76

FILE 'CAPLUS' ENTERED AT 16:27:58 ON 22 MAR 2007

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FILE COVERS 1907 - 22 Mar 2007 VOL 146 ISS 13

FILE LAST UPDATED: 21 Mar 2007 (20070321/ED)

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<http://www.cas.org/infopolicy.html>

=&gt; s 16

L7 34 L6

=&gt; s 17 and py&lt;=2002

22870120 PY&lt;=2002

L8 23 L7 AND PY&lt;=2002

=&gt; d 1-23 bib abs

L8 ANSWER 1 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:601531 CAPLUS

DN 145:63358

TI Supported metallocene catalyst and olefin polymerization therewith

IN Lee, Bun-Yeoul; Oh, Jae-Seung; Lee, Joo-Eun; Lee, Do-Hoon

PA S. Korea

SO U.S. Pat. Appl. Publ., 19 pp., Cont.-in-part of U.S. Ser. No. 666,618.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2006135351	A1	20060622	US 2005-289623	20051130
	KR 2001003325	A	20010115	KR 1999-23575	19990622 <--
	US 2004058804	A1	20040325	US 2003-666618	20030918
	US 7041618	B2	20060509		
PRAI	KR 1999-23575	A	19990622		
	US 2000-526035	B2	20000315		
	US 2003-666618	A2	20030918		

OS MARPAT 145:63358

AB The present invention relates to a metallocene compound having a functional group that facilitates the preparation of the supported metallocene catalyst for olefin polymerization and the olefin polymerization process using the same. The

metallocene compds. in this invention are strongly supported on the inorg. support due to the strong chemical bond of the ligand of the metallocene compound with the silica surface, which leads to minimize leaching of the catalyst during the activation process. Therefore, the supported catalyst of this invention allows the olefin polymerization process to proceed without

any

fouling in the reactor with a slurry or a gas phase process, and the morphol. and bulk d. of the polymer produced are much better defined than those produced by conventional methods.

L8 ANSWER 2 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2004:252167 CAPLUS  
DN 140:254074  
TI Supported metallocene catalyst for olefin polymerization  
IN Lee, Bun-yeoul; Oh, Jae-seung; Lee, Joo-eun; Lee, Do-hoon  
PA Lg Chemical Ltd., S. Korea  
SO U.S. Pat. Appl. Publ., 24 pp., Cont.-in-part of U.S. Ser. No. 526,035.  
CODEN: USXXCO  
DT Patent  
LA English  
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004058804	A1	20040325	US 2003-666618	20030918
	US 7041618	B2	20060509		
	KR 2001003325	A	20010115	KR 1999-23575	19990622 <--
	US 2006135351	A1	20060622	US 2005-289623	20051130
PRAI	KR 1999-23575	A	19990622		
	US 2000-526035	A2	20000315		
	US 2003-666618	A2	20030918		

OS MARPAT 140:254074

AB The title catalyst has a functional group that facilitates the preparation of the supported metallocene catalyst, and utilizes a reaction of the functional group of a ligand such as acetal, ketal, tertiary alkoxyalkyl, benzyloxyalkyl, substituted benzyloxyalkyl, monothioacetal, or monothioacetal with highly reactive silica dehydroxylated at > 600°. The metallocene compds. are strongly supported on the inorg. support due to the strong chemical bond of the ligand of the metallocene compound with the silica surface, which leads to minimized leaching of the catalyst during the activation process. The supported catalyst allows the olefin polymerization

process to proceed without any fouling in the reactor with a slurry or a gas phase process, and the morphol. and bulk d. of the polymer produced are much better defined than those produced by conventional methods.

L8 ANSWER 3 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2003:590693 CAPLUS  
DN 139:129086  
TI Methods for sequencing nucleic acids using probes containing transition metal complexes  
IN Blackburn, Gary; Kayyem, Jon Faiz; Tao, Chunlin; Yu, Changjun  
PA USA  
SO U.S. Pat. Appl. Publ., 83 pp., Cont.-in-part of U.S. Ser. No. 116,726, abandoned.  
CODEN: USXXCO  
DT Patent  
LA English  
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003143556	A1	20030731	US 2002-137710	20020430
	CA 2444186	A1	20021003	CA 2002-2444186	20020403 <--
	WO 2003085082	A2	20031016	WO 2002-US20370	20020403
	WO 2003085082	A3	20050310		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,  
PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,  
UG, UZ, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB,  
GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA,  
GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2002367849 A1 20031020 AU 2002-367849 20020403

EP 1527194 A2 20050504 EP 2002-806823 20020403

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, FI, CY, TR

JP 2005519630 T 20050707 JP 2003-582261 20020403

US 2003232354 A1 20031218 US 2003-336225 20030102

WO 2003093429 A2 20031113 WO 2003-US13665 20030430

WO 2003093429 A3 20040729

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,  
TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,  
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003228806 A1 20031117 AU 2003-228806 20030430

PRAI US 2001-281276P P 20010403

US 2002-116726 B2 20020403

US 2000-626096 A1 20000726

WO 2002-US20370 W 20020403

US 2002-137710 A 20020430

WO 2003-US13665 W 20030430

AB The present invention is directed to methods and compns. for the use of  
electron transfer moieties with different redox potentials to  
electronically detect nucleic acids, particularly for the electrochem.  
sequencing of DNA. Preparation of ferrocene derivs. with multiple redox  
potentials is described.

L8 ANSWER 4 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2002:906249 CAPLUS

DN 138:4862

TI Supported polymerization catalyst using a catalyst precursor having  
functional group and surface modified carrier and olefin polymerization  
using the same

IN Shin, Sang-Young; Lee, Choong-Hoon; Lee, Eun-Jung; Oh, Jae-Seung

PA LG Chem, Ltd., S. Korea

SO PCT Int. Appl., 46 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002094841	A1	20021128	WO 2002-KR979	20020523 <--
	W: CN, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	KR 2002090447	A	20021205	KR 2001-28995	20010525 <--
	EP 1390374	A1	20040225	EP 2002-730961	20020523
	EP 1390374	B1	20060301		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, FI, CY, TR

JP 2004520476	T	20040708	JP 2002-591514	20020523
AT 318830	T	20060315	AT 2002-730961	20020523
ES 2254681	T3	20060616	ES 2002-2730961	20020523
US 2003166455	A1	20030904	US 2002-297816	20021210
US 6908877	B2	20050621		
PRAI KR 2001-28995	A	20010525		
WO 2002-KR979	W	20020523		

AB A supported metallocene catalyst useful for polymerization of olefins is manufactured

by treating a metallocene compound substantially having acetal, ketal, secondary or tertiary alkoxy alkyl, benzyloxyalkyl, substituted benzyloxy alkyl, aryloxyalkyl, dithioacetal, dithioketal, monothioacetal, monothioketal, thioether or alkoxysilane functional group on a part of its ligand with a silane-treated dehydrated silica carrier. Thus, 1.0 g of hexamethyldisilazane-treated silica in 40 mL hexane was mixed with 200 mg [tert-butyl-O-(CH<sub>2</sub>)<sub>6</sub>C<sub>5</sub>H<sub>4</sub>]<sub>2</sub>ZrCl<sub>2</sub> in 10 mL hexane at 85° for 3 h to give a supported catalyst, which (100 mg) was mixed with methylaluminoxane and triethylaluminum to give a catalyst used in the polymerization of ethylene

to

give 115 g polyethylene, compared with 90 g using a catalyst with silica carrier without hexamethyldisilazane treatment.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2002:678433 CAPLUS  
DN 138:122308  
TI Hydrogenation of olefins catalyzed by highly active titanocene/NaH or n-BuLi catalyst systems  
AU Sun, Qi; Sun, Ren-An  
CS Department of Chemistry, Liaoning Normal University, Dalian, 116029, Peop. Rep. China  
SO Chemical Research in Chinese Universities (2002), 18(3), 307-310  
CODEN: CRCUED; ISSN: 1005-9040  
PB Higher Education Press  
DT Journal  
LA English  
AB The effects of the substituents on the cyclopentadienyl ring and the reducing agents on the catalytic activity and the stability of titanocene/NaH or BuLi systems for the hydrogenation of olefins were studied. For the catalyst systems composed of titanocene/NaH or BuLi, the nature and the number of the substituents on the cyclopentadienyl ring control the catalytic behavior of those two systems. The effect of the reducing agent on the catalytic activity is relatively small. The characters of the hydrogenation of various olefins catalyzed resp. by Cp<sub>2</sub>TiCl<sub>2</sub>/NaH or BuLi systems were compared.

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2000:911315 CAPLUS  
DN 134:72040  
TI Supported metallocene catalyst for olefin polymerization  
IN Oh, Jae-Seung; Lee, Bun-Yeoul; Lee, Joo-Eun; Lee, Do-Hoon  
PA LG Chemical Ltd., S. Korea  
SO PCT Int. Appl., 43 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	WO 2000078827	A1	20001228	WO 2000-KR189	20000309 <--

W: AU, CA, CN, JP

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,  
PT, SE

KR 2001003325	A	20010115	KR 1999-23575	19990622 <--
CA 2340713	A1	20001228	CA 2000-2340713	20000309 <--
EP 1196459	A1	20020417	EP 2000-911437	20000309 <--
EP 1196459	B1	20040825		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, FI

JP 2003502492	T	20030121	JP 2001-505584	20000309
JP 3592672	B2	20041124		
AU 767633	B2	20031120	AU 2000-33311	20000309
AT 274534	T	20040915	AT 2000-911437	20000309
ES 2223476	T3	20050301	ES 2000-911437	20000309

PRAI KR 1999-23575 A 19990622  
WO 2000-KR189 W 20000309

OS MARPAT 134:72040

AB The title catalyst has a functional group that facilitates the preparation of the supported metallocene catalyst, and utilizes a reaction of the functional group of a ligand such as acetal, ketal, tertiary alkoxyalkyl, benzyloxyalkyl, substituted benzyloxyalkyl, monothioacetal, or monothioacetal with highly reactive silica dehydroxylated at > 600°. The metallocene compds. are strongly supported on the inorg. support due to the strong chemical bond of the ligand of the metallocene compound with the silica surface, which leads to minimized leaching of the catalyst during the activation process. The supported catalyst allows the olefin

polymerization

process to proceed without any fouling in the reactor with a slurry or a gas phase process, and the morphol. and bulk d. of the polymer produced are much better defined than those produced by conventional methods.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2000:628188 CAPLUS

DN 133:223183

TI Metallocene compounds and their use for olefin polymerization

IN Oh, Jae-seung; Lee, Bun-yeoul; Lee, Joo-eun; Lee, Do-hoon

PA Lg Chemical Ltd., S. Korea

SO PCT Int. Appl., 37 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000052063	A1	20000908	WO 2000-KR167	20000303 <--
	W: AU, CA, CN, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	KR 2000062706	A	20001025	KR 2000-10348	20000302 <--
	CA 2364011	A1	20000908	CA 2000-2364011	20000303 <--
	CA 2364011	C	20070220		
	EP 1214357	A1	20020619	EP 2000-908088	20000303 <--
	EP 1214357	B1	20030820		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	JP 2002538237	T	20021112	JP 2000-602285	20000303 <--
	JP 3547710	B2	20040728		
	AT 247675	T	20030915	AT 2000-908088	20000303
	ES 2199783	T3	20040301	ES 2000-908088	20000303
	AU 772271	B2	20040422	AU 2000-29464	20000303
	US 6506919	B1	20030114	US 2001-914717	20010831
PRAI	KR 1999-6955	A	19990303		

KR 2000-10348 A 20000302  
WO 2000-KR167 W 20000303

OS MARPAT 133:223183

AB A metallocene compound and supported catalysts are easily prepared by the reaction of the Group 4 metal-containing (CR12)aOSiRbYc ligand (Y = H, halogen, alkoxy, aryloxy, amide, or silyloxy radical, R1 = H, or an alkyl, cycloalkyl, aryl, alkenyl, alkylaryl, arylalkyl, or arylalkenyl radical having 1-40 C atoms; R = alkyl, cycloalkyl, aryl, alkenyl, alkylaryl, arylalkyl, or arylalkenyl radical having 1-40 C atoms, a = 1-40, c = 1, 2, or 3, and the sum of b and c = 3) with a support. The olefin polymerization process employing the supported catalyst proceeds without fouling in the reactor, and the morphol. and bulk d. of the polymer are better than by the conventional method.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 8 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2000:573846 CAPLUS

DN 133:177638

TI Method for olefin polymerization with recycling of co-catalyst

IN Lee, Bun-yeoul; Oh, Jae-seung; Oum, Yoon-hyeun; Park, Tai-ho

PA LG Chemical Ltd., S. Korea

SO PCT Int. Appl., 45 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000047635	A1	20000817	WO 2000-KR68	20000128 <--
	W: AU, CA, CN, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	KR 2000052586	A	20000825	KR 1999-62906	19991227 <--
	CA 2326343	A1	20000817	CA 2000-2326343	20000128 <--
	EP 1082357	A1	20010314	EP 2000-902186	20000128 <--
	EP 1082357	B1	20041117		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002536510	T	20021029	JP 2000-598550	20000128 <--
	AU 771870	B2	20040401	AU 2000-23305	20000128
	AT 282643	T	20041215	AT 2000-902186	20000128
	ES 2226776	T3	20050401	ES 2000-902186	20000128
	US 6340728	B1	20020122	US 2000-494711	20000131 <--
PRAI	KR 1999-3027	A	19990130		
	KR 1999-62906	A	19991227		
	WO 2000-KR68	W	20000128		

OS MARPAT 133:177638

AB The present invention relates to a catalyst preparation process and an olefin polymerization process with the recycling of co-catalyst, particularly to a method of recycling co-catalyst for the activation of single-site pre-catalyst in the olefin polymerization This invention, therefore, provides an

olefin polymerization process that can reuse expensive co-catalyst for subsequent

olefin polymerization so that the total amount of co-catalyst required can be significantly reduced. This invention provides an olefin polymerization

process

which comprises the steps of: (a) preparing activated single-site catalysts by contacting (i) supported single-site pre-catalyst with (ii) an organic solvent containing co-catalysts; (b) separating activated single-site catalysts of

step (a) from co-catalysts dissolved in an organic solvent; (c) olefin polymerization using the separated single-site catalysts of step (b) with one or more



olefinic monomers; and (d) reusing the separated co-catalysts of step (b) by recycling an organic solvent containing the separated co-catalysts and contacting

them with the supported single-site pre-catalysts of step (a).

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 9 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2000:239078 CAPLUS

DN 133:17861

TI Preparation of Anchored Metallocene Complexes on Dehydroxylated Silica and Their Use in the Polymerization of Ethylene

AU Lee, Bun Yeoul; Oh, Jae Seung

CS LG Chemical Ltd./Research Park, Yusung-gu, Taejon, 305-380, S. Korea

SO Macromolecules (2000), 33(9), 3194-3195

CODEN: MAMOBX; ISSN: 0024-9297

PB American Chemical Society

DT Journal

LA English

AB Seven zirconocene complexes having acetal, ketal, or tert-Bu ether groups as a substituent on the cyclopentadienyl ring were synthesized from 6-chlorohexanol. These zirconocene complexes were anchored by reaction with dehydroxylated SiO<sub>2</sub> in hexane at 85° for 3 h. The catalytic activities of anchored zirconocenes were evaluated by ethylene polymerization under methylaluminumoxane activation. Mol. weight (MW), MW distribution, bulk d., polymer particle size distribution, and morphol. of the obtained polymers were determined

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 10 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1999:8534 CAPLUS

DN 130:139440

TI Preparation, Properties, and Reactions of Metal-Containing Heterocycles. Part 98. Synthesis, Structure, and Electrochemistry of Osmametallophenes with Different Ring Size

AU Lindner, Ekkehard; Krebs, Ilmari; Fawzi, Riad; Steimann, Manfred; Speiser, Bernd

CS Institut fuer Anorganische Chemie, Universitaet Tuebingen, Tuebingen, D-72076, Germany

SO Organometallics (1999), 18(4), 480-489

CODEN: ORGND7; ISSN: 0276-7333

PB American Chemical Society

DT Journal

LA English

OS CASREACT 130:139440

AB The reaction of the bis(triflates) [ $\eta^5$ -C<sub>5</sub>H<sub>4</sub>(CH<sub>2</sub>)<sub>n</sub>OTf]<sub>2</sub>M [n = 3, M = Fe (4a), Ru (5a); n = 4, M = Fe (4b), Ru (5b); n = 6, M = Fe (4c), Ru (5c)], which were obtained from the bis(alcs.) [ $\eta^5$ -C<sub>5</sub>H<sub>4</sub>(CH<sub>2</sub>)<sub>n</sub>OH]<sub>2</sub>M (2a-c, 3a-c) and (CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub>O in the presence of pyridine, with Na<sub>2</sub>[Os(CO)<sub>4</sub>] in di-Me ether gave the novel osmametallophenes [ $\eta^5$ -C<sub>5</sub>H<sub>4</sub>(CH<sub>2</sub>)<sub>n</sub>Os(CO)<sub>4</sub>(CH<sub>2</sub>)<sub>n</sub>C<sub>5</sub>H<sub>4</sub>- $\eta^5$ ]<sub>2</sub>M (6a-c, 7a-c). The structures of 6b (n = 4, M = Fe) and 7c (n = 6, M = Ru) were studied by x-ray structural analyses. In a similar way the bis(rhenium) complexes [ $\eta^5$ -C<sub>5</sub>H<sub>4</sub>(CH<sub>2</sub>)<sub>n</sub>Re(CO)<sub>5</sub>]<sub>2</sub>M (8a-c, 9a-c) were made accessible from the bis(triflates) 4a-c and 5a-c and Na[Re(CO)<sub>5</sub>] in THF. The dependence of the redox behavior of the metallocene unit in the osmametallophenes 6a-c and 7b,c on the metal-metal distance was examined by cyclic voltammetry. The obtained results were compared with those of the bis(alcs.) 2a-c and 3a-c and the bis(rhenium) complexes 8a-c and 9a-c. The ferrocenes were characterized by a reversible 1-electron oxidation, whereas the ruthenocenes feature an irreversible two-electron process accompanied by a chemical reaction. A consistent through-space effect of the spacer-bound substituents on the redox potential is observed in the case of

the ferrocenes.

RE.CNT 89 THERE ARE 89 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 11 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1998:348238 CAPLUS  
DN 129:41447  
TI Novel liquid-crystalline titanocene complexes with catalytic activity for  
polymerizations of acetylene and phenylacetylene  
AU Piao, G.; Goto, H.; Akagi, K.; Shirakawa, H.  
CS Institute of Materials Science, University of Tsukuba, Tsukuba, 305-8573,  
Japan  
SO Polymer (1998), 39(15), 3559-3564  
CODEN: POLMAG; ISSN: 0032-3861  
PB Elsevier Science Ltd.  
DT Journal  
LA English  
AB We have synthesized a series of novel titanocene complexes with  
liquid-crystalline (LC) groups as coordination ligands, with the ultimate aim  
of

developing LC catalytic species available for anisotropic polymers of  
acetylenes. The titanocene complexes were prepared by introducing LC groups  
into cyclopentadienyl ligands as substituents, (PCH506Cp)<sub>2</sub>TiCl<sub>2</sub> (I), or  
coordinating them to a titanium atom as sym. and asym. ligands,  
Cp<sub>2</sub>Ti(PCH506)<sub>2</sub> (II) and Cp<sub>2</sub>Ti(PCH506)Cl (III) [where Cp =  
cyclopentadienyl, PCH506 = p-(trans-4-n-pentylcyclohexyl)phenoxyhexyl and  
PCH5060 = p-(trans-4-n-pentylcyclohexyl)phenoxyhexyloxy]. Polarizing  
optical microscope observations and differential scanning calorimetry  
measurements indicated that the titanocene complexes II and III are the  
first titanium complexes exhibiting LC behavior. The titanocene complexes  
I and II can polymerize phenylacetylenes to give poly(phenylacetylene)s  
with the aid of triethylaluminum (Et<sub>3</sub>Al) as cocatalyst. The mol. wts. and  
ds.p. of the poly(phenylacetylene)s prepared were comparable or superior to  
those prepared with titanocene dichloride and tetra-n-butoxytitanium  
[Ti(O-n-Bu)<sub>4</sub>] catalysts. The LC titanocene complexes II and III were also  
confirmed to have catalytic activities for the polymerization of acetylene.

ESR spectra of the catalyst systems gave signals of trivalent titanium (Ti<sup>3+</sup>)  
with no hyperfine structure, suggesting that the catalytically active  
species is a mononuclear complex consisting of Ti<sup>3+</sup> rather than a  
binuclear or trinuclear one.

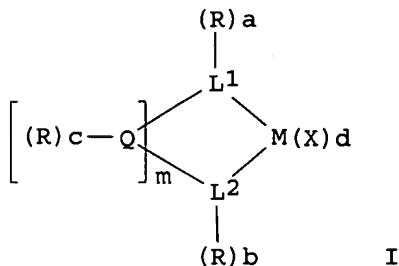
RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 12 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1998:304150 CAPLUS  
DN 128:322092  
TI Metallocene catalyst systems for polymerization of  $\alpha$ -olefins  
IN Sancho Royo, Jose; Hidalgo Llinas, Gerardo; Munoz-Escalona Lafuente,  
Antonio; Martinez Nunez, Francisca; Martin, Marcos Carlos; Lafuente Canas,  
Pilar; Pena Garcia, Begona  
PA Repsol Quimica S.A., Spain  
SO Eur. Pat. Appl., 15 pp.  
CODEN: EPXXDW  
DT Patent  
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 839836	A1	19980506	EP 1997-500187	19971031 <--
	EP 839836	B1	20001220		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	NO 9705049	A	19980504	NO 1997-5049	19971031 <--

NO 318716	B1	20050502		
JP 10226709	A	19980825	JP 1997-336255	19971031 <--
AT 198210	T	20010115	AT 1997-500187	19971031 <--
ES 2154017	T3	20010316	ES 1997-500187	19971031 <--
PT 839836	T	20010629	PT 1997-500187	19971031 <--
US 2003195109	A1	20031016	US 1997-961956	19971031
US 2005065019	A1	20050324	US 2004-893754	20040716
PRAI ES 1996-2310	A	19961031		
US 1997-961956	B3	19971031		
OS MARPAT 128:322092				
GI				



AB The catalyst systems, contain (LRa)<sub>x</sub>MX<sub>y</sub> or I (R = H, C1-20 radical optionally containing heteroatoms of Groups 14-16 of the periodic table of the elements and B; ≥1 group of R contains a group of OSiR<sub>2</sub>3; Q = B or an element from Groups 14-16 of the periodic table; m = 1-4, preferably 1 or 2; L, L1, L2 = cyclic organic group united to M through a π bond, or atom of Groups 15 or 16 of the periodic table; M = metal of Groups 3, 4, 10 of the periodic table, lanthanide or actinide; X = halo, H, OR<sub>3</sub>, NR<sub>3</sub>2, C1-20 alkyl, C6-20 aryl; R<sub>2</sub>, R<sub>3</sub> = C1-20 alkyl, C3-20 cycloalkyl, C6-20 aryl, etc.; x = 1, 2; y = 2, 3; x + y = 4; d = 0-2; a, b, c = 0-10; a + b + c ≥ 1). Thus, polymerization of ethylene in the presence of methylaluminoxanes and silica-supported [cyclopentadienyl(3-trimethylsiloxypropyl)cyclopentadienyl]zirconium dichloride gave a polymer with catalyst activity 1.4 + 10<sup>5</sup> g polymer/mol Zr·h·atmospheric

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 13 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1998:210446 CAPLUS  
DN 128:308781  
TI Ethylene polymerization by zirconocene compounds having ether bonds  
AU Lee, Bun Yeoul; Oh, Jae Seung  
CS Research Park, LG Chemical, Taejon, 305-380, S. Korea  
SO Journal of Organometallic Chemistry (1998), 552(1-2), 313-317  
CODEN: JORCAI; ISSN: 0022-328X  
PB Elsevier Science S.A.  
DT Journal  
LA English  
AB Zirconocene compds. having ether bonds at the substituent of cyclopentadienyl ligand, [η<sup>5</sup>-C<sub>5</sub>H<sub>4</sub>(CH<sub>2</sub>)<sub>n</sub>OCH<sub>2</sub>CH<sub>2</sub>OCH<sub>2</sub>CH<sub>3</sub>]<sub>2</sub>ZrCl<sub>2</sub> (n=2, 4, 6, 8) and [η<sup>5</sup>-C<sub>5</sub>H<sub>4</sub>CH<sub>2</sub>CH<sub>2</sub>OCH<sub>2</sub>CH<sub>3</sub>]<sub>2</sub>ZrCl<sub>2</sub>, were prepared and tested as polymerization catalysts for ethylene with methylaluminoxane as a cocatalyst. The presence of oxygen atom close to the metal center drastically reduced the polymerization activity. The polymerization activity increased as the distance between zirconium and oxygen atom increased and showed a maximum when n was 6.

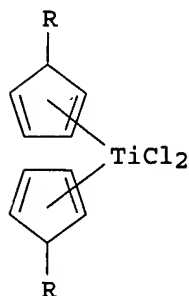
RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 14 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1997:370191 CAPLUS  
 DN 127:81812  
 TI Liquid crystalline titanocene with catalytic activity for polymerizations of acetylene derivatives  
 AU Akagi, K.; Goto, H.; Bannai, H.; Piao, G.; Shirakawa, H.  
 CS Inst. Materials Science, Univ. Tsukuba, Ibaraki, 305, Japan  
 SO Synthetic Metals (1997), 86(1-3), 1879-1880  
 CODEN: SYMEDZ; ISSN: 0379-6779  
 PB Elsevier  
 DT Journal  
 LA English  
 AB Two kinds of liquid crystalline (LC) titanocenes have been synthesized with an aim to construct a new type of anisotropic polymerization field. The titanocene derivs. were prepared by introducing LC groups into cyclopentadienyl ligands as substituents, (PCH506Cp)<sub>2</sub>TiCl<sub>2</sub> (I) or coordinating them to titanium atom as ligands, Cp<sub>2</sub>Ti(PCH5060)<sub>2</sub> (II). Observations of polarizing optical microscope and measurements of DSC indicated that II is the first titanium complex exhibiting a thermotropic LC phase. We found that both the titanocene derivs. can polymerize phenylacetylenes to give poly(phenylacetylene)s with an aid of triethylaluminum used as a cocatalyst. Mol. wts. and polymerization degrees of the polymers were comparable or superior to those by catalysts such as a titanocene dichloride [Cp<sub>2</sub>TiCl<sub>2</sub>] and a tetra-n-butoxytitanium [Ti(O-n-Bu)<sub>4</sub>]. The LC titanocene derivative II was also confirmed to have a high catalytic activity for acetylene polymerization. These results should shed light on development of novel anisotropic reaction field available for syntheses of directly aligned conducting polymers.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 15 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1997:34660 CAPLUS  
 DN 126:185774  
 TI Highly active catalyst systems composed of titanocene/NaH or n-BuLi for the olefin hydrogenation  
 AU Sun, Qi; Liao, Shijian; Xu, Yun; Qian, Yanlong; Huang, Jiling  
 CS Dalian Inst. Chem. Physics, Chinese Academy of Sci., Dalian, 116023, Peop. Rep. China  
 SO Cuihua Xuebao (1996), 17(6), 495-496  
 CODEN: THHPD3; ISSN: 0253-9837  
 PB Kexue  
 DT Journal  
 LA English  
 GI



AB Reducing titanocene dichloride (I; R = H) with NaH or BuLi yielded a system which catalyzed 1-hexene hydrogenation with maximum turnover frequencies of 57 and 44 s<sup>-1</sup>, resp. I (R = CH<sub>2</sub>CH:CHMe-trans) in these systems showed maximum turnovers of 5900 and 8600, resp.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD.  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 16 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1996:656742 CAPLUS

DN 125:328975

TI New substituted titanocene, zirconocene and hafnocene dichlorides

AU Qian, Yanlong; Huang, Jiling; Huang, Taishen; Chen, Shoushan

CS Lab. Organometallic Chem., East China Univ. Sci. Technol., Shanghai, 200237, Peop. Rep. China

SO Transition Metal Chemistry (London) (1996), 21(5), 393-397

CODEN: TMCHDN; ISSN: 0340-4285

PB Chapman & Hall

DT Journal

LA English

AB Twenty-two new substituted metallocene Cp1Cp2MCl2 (M = Ti, Zr or Hf, Cp1, Cp2 = substituted cyclopentadienyl) were prepared and the catalytic activity of some of them in alkene polymerization was evaluated.

L8 ANSWER 17 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1995:956900 CAPLUS

DN 124:146371

TI Mass spectrometry of derivatives of dicyclopentadienyltitanium dichloride. II. Comparison of chemical ionization and liquid secondary ion mass spectrometric behavior

AU Wang, Fu; Fang, Ming; Wu, Wannian; Chen, Xuehua; Huang, Jieli

CS Res. Cent., Hong Kong Univ. Sci. Technol., Clearwater Bay, Hong Kong

SO Rapid Communications in Mass Spectrometry (1995), 9(14), 1362-5

CODEN: RCMSEF; ISSN: 0951-4198

PB Wiley

DT Journal

LA English

AB Pos./neg. chemical ionization (PI/NI CI) and liquid secondary ion mass spectrometry (LSIMS) of ten derivs. of dicyclopentadienyltitanium(IV) dichloride were investigated. The major ions detected were [M + NJH<sub>4</sub>]<sup>+</sup>, [M - Cl]<sup>+</sup>, [M - 2Cl]<sup>+</sup>, [M - R1CpR3]<sup>+</sup> and [M - R2CpR4]<sup>+</sup> in PICI (ammonia) mass spectra, M<sup>-</sup>, [M + Cl]<sup>-</sup>, [M - Cl]<sup>-</sup>, [M + Cl - R1CpR3]<sup>-</sup> and [M + Cl - R2CpR4]<sup>-</sup> in NICI (ammonia) mass spectra, and [M - Cl]<sup>+</sup>, [M - 2Cl]<sup>+</sup>, [M - 2Cl + (NBA - H)]<sup>+</sup> (where NBA = m-nitrobenzyl alc.), [M - R1CpR3]<sup>+</sup>, [M - R2CpR4]<sup>+</sup>, [M - R1CpR3 - HCl]<sup>+</sup> and [M - R2CpR4 - HCl]<sup>+</sup> (where R1CpR3 and R2CpR4 are both mixed alkyl-aryl substituted cyclopentadienyl groups) in LSIMS. Although the mass spectrometric behaviors are quite different due to the different ionization mode, adduct ions were observed in all mass spectra and mol. ions were only observed in NICI mass spectra. The cleavage pathways were confirmed using tandem mass spectrometry methods.

L8 ANSWER 18 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1995:930842 CAPLUS

DN 123:341160

TI New ferrocene-containing copolyesters

AU Wilbert, Goetz; Wiesemann, Amadeus; Zentel, Rudolf

CS Inst. Org. chem., Univ. Mainz, Mainz, D-55099, Germany

SO Macromolecular Chemistry and Physics (1995), 196(11), 3771-88

CODEN: MCHPES; ISSN: 1022-1352

PB Huethig & Wepf

DT Journal

LA English

AB We have synthesized four new ferrocene monomers (three diols and one diester). The redox potential of these ferrocene derivs. varies between 0

mV and 230 mV due to different degrees of ring alkylation. Amorphous and liquid crystalline copolyesters were prepared with these monomers in the polymer

main chain. Cyclovoltammetric measurements show that the redox potential of the ferrocene units is increased by about 40 mV upon polymer formation (esterification). Since the ester group is 4 to 6  $\sigma$ -bonds away from the ferrocene unit this increase is probably caused by some charge-transfer interaction through space. First rheol. measurements show an unusual rubber-like behavior of the ferrocene-containing copolyesters.

L8 ANSWER 19 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1995:903964 CAPLUS

DN 124:117483

TI Mass spectrometry of derivatives of dicyclopentadienyltitanium dichloride. I. Behavior in electron impact ionization mass spectrometry

AU Wang, Fu; Fang, Ming; Wu, Wannian; Chen, Xuehua; Huang, Jieli

CS Res. Cent., Hong Kong Univ. Sci. Technol., Clearwater Bay, Hong Kong

SO Rapid Communications in Mass Spectrometry (1995), 9(13), 1266-9

CODEN: RCMSEF; ISSN: 0951-4198

PB Wiley

DT Journal

LA English

AB Electron impact (EI) mass spectra of ten derivs. of dicyclopentadienyltitanium (IV) dichloride, e.g., (C<sub>5</sub>H<sub>5</sub>)(C<sub>5</sub>H<sub>4</sub>CHMeCH<sub>2</sub>OMe)TiCl<sub>2</sub>, were studied. Fragmentation pathways were constructed and confirmed using daughter-ion, parent-ion and neutral-species loss scan modes of MS.

L8 ANSWER 20 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1995:232558 CAPLUS

DN 122:187746

TI Ether- and amine-substituted cyclopentadienes as ligands in organometallic compounds: examples for iron and barium

AU Rees, William S. Jr.; Lay, Uwe W.; Dippel, Kerstin A.

CS Department of Chemistry and Materials Research and Technology Center, The Florida State University, Tallahassee, FL, 32306-3006, USA

SO Journal of Organometallic Chemistry (1994), 483(1-2), 27-31

CODEN: JORCAI; ISSN: 0022-328X

PB Elsevier

DT Journal

LA English

AB Cyclopentadienes with Lewis donor atoms in side chains C<sub>5</sub>H<sub>5</sub>CH<sub>2</sub>CH<sub>2</sub>R (R = OMe, OEt, CH<sub>2</sub>OEt, NMe<sub>2</sub>, OCH<sub>2</sub>CH<sub>2</sub>OMe) are described. After deprotonation, these compds. can be used as ligands in Main Group and transition element chemical, as shown by the examples of bariocenes and ferrocenes. <sup>13</sup>C-NMR evidence for the Lewis base stabilization of Ba(C<sub>5</sub>H<sub>4</sub>CH<sub>2</sub>CH<sub>2</sub>OCH<sub>2</sub>CH<sub>2</sub>OMe)<sub>2</sub> is presented. The compds. [parent cyclopentadiene for R = OCH<sub>2</sub>CH<sub>2</sub>OMe; Ba(C<sub>5</sub>H<sub>4</sub>CH<sub>2</sub>CH<sub>2</sub>OCH<sub>2</sub>CH<sub>2</sub>OMe)<sub>2</sub>; Fe(C<sub>5</sub>H<sub>4</sub>CH<sub>2</sub>CH<sub>2</sub>R)<sub>2</sub> for all R] are characterized by <sup>1</sup>H- and <sup>13</sup>C{<sup>1</sup>H}-NMR, IR, MS and elemental anal.

L8 ANSWER 21 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1993:560448 CAPLUS

DN 119:160448

TI Synthesis of (3-methoxypropyl)cyclopentadienyltitanium and -zirconium complexes

AU Qian, Yanlong; Li, Guisheng

CS Shanghai Inst. Org. Chem., Acad. Sin., Shanghai, 200032, Peop. Rep. China

SO Polyhedron (1993), 12(8), 967-70

CODEN: PLYHDE; ISSN: 0277-5387

DT Journal

LA English

OS CASREACT 119:160448

AB Four titanium and zirconium complexes of (3-methoxypropyl)cyclopentadienyl, Cp'<sub>2</sub>MCl<sub>2</sub> (M = Ti, Zr), Cp'CpTiCl<sub>2</sub> and Cp'Cp''TiCl<sub>2</sub> (Cp = C<sub>5</sub>H<sub>5</sub>, Cp' =

MeOCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>C<sub>5</sub>H<sub>4</sub>, Cp'' = MeOCH<sub>2</sub>CH<sub>2</sub>C<sub>5</sub>H<sub>4</sub>), have been synthesized in good yields by reacting the potassium salt Cp'K with MCl<sub>4</sub> (M = Ti, Zr), CpTiCl<sub>3</sub> and Cp''TiCl<sub>3</sub>, resp. Their IR spectra show that the oxygen atom in the side-chain does not coordinate with the central metals, while mass spectra imply the coordination of oxygen with the metals is possible, in particular in some low-valent species.

L8 ANSWER 22 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1992:522021 CAPLUS

DN 117:122021

TI Synthesis and thermal properties of mesomorphic 1,1'-bis[ω-(4'-cyano-4-biphenyloxy)alkyl]ferrocenes

AU Bhatt, J.; Fung, B. M.; Nicholas, Kenneth M.

CS Dep. Chem. Biochem., Univ. Oklahoma, Norman, OK, 73019, USA

SO Liquid Crystals (1992), 12(2), 263-72

CODEN: LICRE6; ISSN: 0267-8292

DT Journal

LA English

AB A new series of 1,1'-disubstituted ferrocene compds. of the type [(η<sup>5</sup>-C<sub>5</sub>H<sub>4</sub>(CH<sub>2</sub>)<sub>n</sub>OCC<sub>6</sub>H<sub>4</sub>C<sub>6</sub>H<sub>4</sub>CN)]<sub>2</sub>Fe (3a-d, n = 5, 6, 8, 11) incorporating a variable length alkyloxy cyanobiphenyl unit was prepared and their mesomorphic properties were investigated. Compds., 3b, c and d exhibit a thermotropic smectic C phase and 3c also exhibits a monotropic smectic A phase over a fairly wide range near ambient temperature

L8 ANSWER 23 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1990:554799 CAPLUS

DN 113:154799

TI Ferrocene derivatives, surfactants containing them, and manufacture of organic thin films

IN Hiroi, Yoshio; Sakaeda, Noboru; Yokoyama, Seiichiro

PA Idemitsu Kosan Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02083387	A	19900323	JP 1988-233798	19880920 <--
PRAI	JP 1988-233798		19880920		

OS MARPAT 113:154799

AB Hydrophobic organic substances solubilized in aqueous media in the presence of ferrocene derivs. such as 1,1'-ferrocenedibutyric acid polyethylene glycol diesters (I) and micelle solns. of electrolyte deposit thin films of hydrophobic organic substances on electrodes. Thus, a micelle solution containing I and phthalocyanine was electrolyzed to deposit a thin film on an ITO transparent glass anode.

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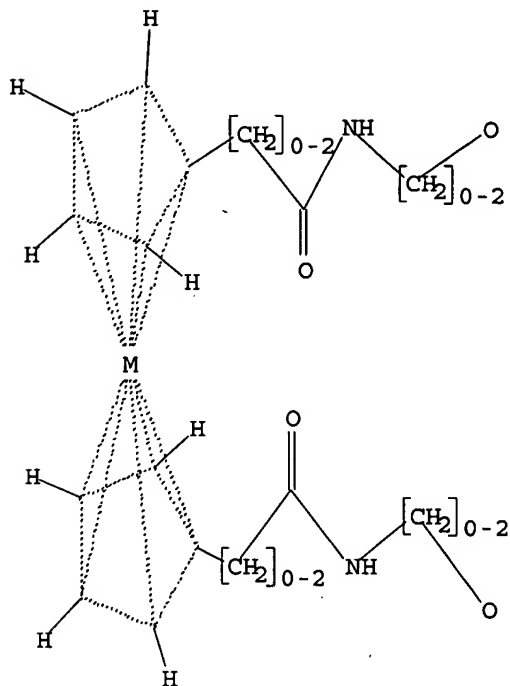
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L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

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SAMPLE SCREEN SEARCH COMPLETED - 4109 TO ITERATE

48.7% PROCESSED 2000 ITERATIONS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 78336 TO 86024  
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 17:15:39 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 81734 TO ITERATE

100.0% PROCESSED 81734 ITERATIONS  
SEARCH TIME: 00.00.01

9 ANSWERS

L3 9 SEA SSS FUL L1



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FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
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L4 5 L3

=> d 1-5 bib abs

L4 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2006:880694 CAPLUS  
DN 145:451157  
TI Design and Synthesis Of Ferrocene Probe Molecules for Detection by Electrochemical Methods  
AU Tranchant, Isabelle; Herve, Anne-Cecile; Carlisle, Stephen; Lowe, Phillip; Slevin, Christopher J.; Forssten, Camilla; Dilleen, John; Williams, David E.; Tabor, Alethea B.; Hailes, Helen C.  
CS Department of Chemistry, University College London, London, WC1H 0AJ, UK  
SO Bioconjugate Chemistry (2006), 17(5), 1256-1264  
CODEN: BCCHES; ISSN: 1043-1802  
PB American Chemical Society  
DT Journal  
LA English  
AB A series of ferrocenyl conjugates to fatty acids have been designed and synthesized to establish the key properties required for use in biomol. binding studies. Amperometric detection of the ferrocene conjugates was sought in the region of 0.3 V (vs. Ag/AgCl) for use in protein/blood solns. Different linkers and solubilizing moieties were incorporated to produce a conjugate with optimal electrochem. properties. In electrochem. studies, the linker directly attached to the ferrocene was found to affect significantly the E1/2 value and the stability of the ferrocenium cation. Ester-linked ferrocene conjugates had E1/2 ranging from +400 to +410 mV, while amide-linked compds. ranged from +350 to +370 mV and the amines +260 to +270 mV. Folding of long-chain substituents around the ferrocene, also significantly affected by the choice of linker, was inferred as a secondary effect that increased E1/2. The stability of the ferrocenium cation decreased systematically as E1/2 increased. Disubstituted ferrocene ester and amide conjugates, with oxidation potentials of +640 and +570 mV, resp., showed only a barely discernible reduction wave in cyclic

voltammetry at 50 mV/s. Electrochem. measurements identified two lead compds. with the common structural characteristics of an amide and carbamate linker (compds. 17 and 21) with a C11 fatty acid chain attached. It is envisaged that such mols. can be used to mimic and study the biomol. binding interaction between fatty acids and mols. such as human serum albumin.

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2005:226663 CAPLUS  
DN 143:347260  
TI Preparation and hydrogen bonding in ferrocenecarboxamides substituted with 2-hydroxyethyl groups at the amide nitrogen atoms  
AU Stepnicka, Petr; Cisarova, Ivana  
CS Department of Inorganic Chemistry, Faculty of Science, Charles University, Prague, 12840, Czech Rep.  
SO CrystEngComm (2005), 7, 37-43  
CODEN: CRECF4; ISSN: 1466-8033  
URL: <http://pubs.rsc.org/ej/CE/2005/b417062h.pdf?&Yr=2005&VOLNO=%26nbsp%3B%3Cb%3E7%3C%2Fb%3E%26nbsp%3B&Fp=37&Ep=43&JournalCode=CE&Iss=4>  
PB Royal Society of Chemistry  
DT Journal; (online computer file)  
LA English  
OS CASREACT 143:347260  
AB The ferrocenecarboxamides, N-(2-hydroxyethyl)ferrocenecarboxamide (1a), N,N-bis(2-hydroxyethyl)ferrocenecarboxamide (1b), N,N'-bis(2-hydroxyethyl)ferrocene-1,1'-dicarboxamide (2a), and N,N',N'-tetrakis(2-hydroxyethyl)ferrocene-1,1'-dicarboxamide (2b) were synthesized by amidation of the resp. ferrocenecarboxylic acids, characterized by spectral methods including variable-temperature NMR spectroscopy, and their crystal structures were determined by single-crystal x-ray diffraction anal. In the solid-state, the amides associate predominantly via two-center O-H...O and N-H...O hydrogen bonds with a support from the softer C-H...O interactions. The supramol. aggregation takes various forms, ranging from infinite one-dimensional hydrogen-bonded chains (1a) and ladder-like arrays (1b) to complicated three-dimensional networks (2a and 2b), and its complexity apparently increases with the number of the potential hydrogen bond donor and acceptor groups present in the mol.

RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2002:149397 CAPLUS  
DN 137:149219  
TI Synthesis and characterization of rare earth metal complexes of 1,1'-ferrocenediacetyl hydroxylamine  
AU Fan, Rui-lan; Bian, Zhan-xi; Li, Bao-guo; Jiang, Yu-li  
CS College of Chemistry and Chemical Engineering, NeiMongol University, Hohhot, 010021, Peop. Rep. China  
SO Neimenggu Daxue Xuebao, Ziran Kexueban (2002), 33(1), 53-56  
CODEN: NDZKEJ; ISSN: 1000-1638  
PB Neimenggu Daxue Xuebao Bianjibu  
DT Journal  
LA Chinese  
OS CASREACT 137:149219  
AB Seven complexes Ln(FcCH2CONHO)2Cl·nH2O (Ln = La, Ce, Pr, Nd, Sm, Eu, Gd; n = 2-4) were synthesized by reaction of rare earth metal(III) chlorides with 1,1'-ferrocenediacetyl(hydroxylamine) which was obtained by the reaction of 1,1'-ferrocenediacetyl chloride with hydroxylamine. The structures were characterized by elemental anal., IR and 1H NMR spectra.

L4 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2002:140315 CAPLUS

DN 136:386309

TI Ferrocene-containing carbohydrate dendrimers

AU Ashton, Peter R.; Balzani, Vincenzo; Clemente-Leon, Miguel; Colonna, Barbara; Credi, Alberto; Jayaraman, Narayanaswamy; Raymo, Francisco M.; Stoddart, J. Fraser; Venturi, Margherita

CS School of Chemistry, University of Birmingham, Birmingham, B15 2TT, UK

SO Chemistry--A European Journal (2002), 8(3), 673-684

CODEN: CEUJED; ISSN: 0947-6539

PB Wiley-VCH Verlag GmbH

DT Journal

LA English

OS CASREACT 136:386309

AB Aliphatic amines, incorporating one or three (branched) acylated  $\beta$ -D-glucopyranosyl residues, were coupled with the acid chloride of ferrocenecarboxylic acid and with the diacid chloride of 1,1'-ferrocenedicarboxylic acid to afford four dendrimer-type, carbohydrate-coated ferrocene derivs. in good yields (54 - 92%). Deprotection of the peracylated  $\beta$ -D-glucopyranosyl residues was achieved quant. by using Zemplen conditions, affording four water-soluble ferrocene derivs. When only one of the two cyclopentadienyl rings of the ferrocene unit is substituted, strong complexes are formed with  $\beta$ -cyclodextrin in H<sub>2</sub>O, as demonstrated by liquid secondary ion mass spectrometry (LSIMS), <sup>1</sup>H NMR spectroscopy, electrochem. measurements, and CD spectroscopy. Mol. dynamics calcs. showed that the unsubstituted cyclopentadienyl ring is inserted through the cavity of the toroidal host in these complexes. The electrochem. behavior of the protected and deprotected ferrocene-containing dendrimers was investigated in acetonitrile and water, resp. The diffusion coefficient decreases with increasing mol.

weight

of the compound The potential for oxidation of the ferrocene core, the rate constant of heterogeneous electron transfer, and the rate constant for the energy-transfer reaction with the luminescent excited state of the [Ru(bpy)<sub>3</sub>]<sup>2+</sup> complex (bpy = 2,2'-bipyridine) are strongly affected by the number (one or two) of substituents and by the number (one or three) of carbohydrate branches present in the substituents. These effects are assigned to shielding of the ferrocene core by the dendritic branches. Electrochem. evidence for the existence of different conformers for one of the dendrimers in aqueous solution was obtained.

RE.CNT 141 THERE ARE 141 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1995:930302 CAPLUS

DN 124:117565

TI Synthesis, structure and anion co-ordination chemistry of a novel macrocyclic cobaltocenium receptor

AU Beer, Paul D.; Drew, Michael G. B.; Hodacova, Jana; Stokes, Sally E.

CS Inorg. Chem. Lab., Univ. Oxford, Oxford, OX1 3QR, UK

SO Journal of the Chemical Society, Dalton Transactions: Inorganic Chemistry (1995), (21), 3447-53

CODEN: JCDBTI; ISSN: 0300-9246

PB Royal Society of Chemistry

DT Journal

LA English

AB A new macrocyclic amide-substituted cobaltocenium receptor, 1,1'-[(ethylenedioxy)bis(ethyleneaminocarbonyl)]cobaltocenium hexafluorophosphate 2 has been prepared and its single-crystal x-ray structure determined. Proton NMR anion co-ordination studies revealed that 2 and other new acyclic cobaltocenium derivs. complex chloride and bromide anions with 1:1 stoichiometry. Comparative stability constant evaluations imply that the macrocyclic receptor 2 forms halide complexes of greatest thermodyn. stability, suggestive of a 'macrocyclic anion effect'. Cyclic

voltammetric investigations showed the cobaltocenium receptors to electrochem. recognize halide anions.

(FILE 'HOME' ENTERED AT 17:18:22 ON 22 MAR 2007)

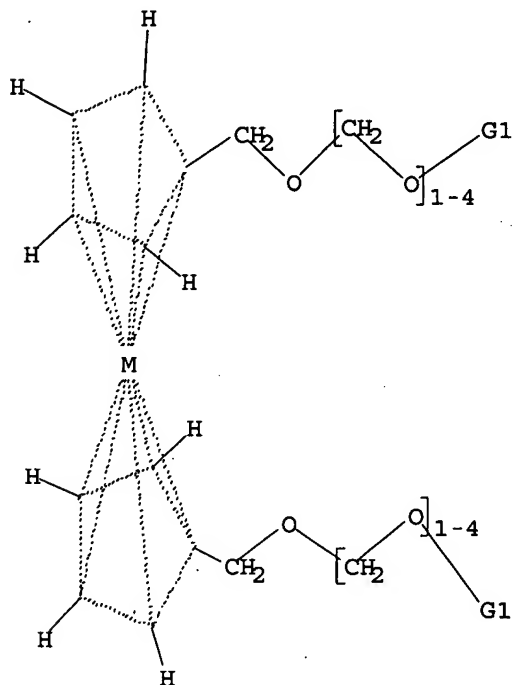
FILE 'REGISTRY' ENTERED AT 17:32:47 ON 22 MAR 2007

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



G1 H,A

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 17:33:27 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 971 TO ITERATE

100.0% PROCESSED 971 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 17551 TO 21289

PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 17:33:31 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 19673 TO ITERATE

100.0% PROCESSED 19673 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

L3 0 SEA SSS FUL L1